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EXAMINER

CHEN, SOPHIA S

ART UNIT PAPER NUMBER

2852

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/814,145

Applicant(s)

MIURA, TATSUYUKI

Examiner

Sophia S. Chen

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-8,10,11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-8,10,11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### **DETAILED ACTION**

1. Applicant's arguments with respect to claims 13-15 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Objections***

2. Claims 13, 3, and 5-8 are objected to because of the following informality: Claim 13, line 14, "a inverted" should be "an inverted". Appropriate correction is required.

#### ***Claim Rejections – 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13, 3, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (US Pat. No. 5,815,772, cited in previous Form PTO-892 with Paper No. 20040714) in view of Yanagi (US Pat. No. 6,041,213, cited in previous Form PTO-892 with Paper No. 20040714).

Saito et al. discloses an image forming apparatus comprising: an image carrier 16; a transfer device 28 provided opposite to the image carrier 16 with a first carrying path 26 interposing therebetween, for transferring the image to an object (paper) which is carried through the first carrying path 26 (column 3, lines 21-25); a discharging

section 38 for receiving an object (paper), onto both surfaces of which an image is transferred by the transfer device 28, carried from the first carrying path 26 (column 3, lines 34-54); a carrying device 36 for carrying an object (paper), onto one surface of which an image is transferred by the transfer device 28, toward the discharge section 38 by a predetermined distance, and then carrying the object (paper) in a direction away from the discharge section 38 (column 3, lines 34-43); and a second carrying path 40 on which the object (paper) carried in the direction away from the discharge section 38 by the carrying device 36 is guided from a downstream side of the transfer device of the first carrying path 26 and is guided in an inverted state to an upstream side of the first carrying path 26 (Figure 1); wherein the second carrying path 40 includes a first roller pair 42 upstream of the object carrying direction, a second roller pair 48 downstream of the object carrying direction, and a third roller pair 44 between the first and second roller pairs 42 and 48 (Figure 1).

Saito et al. further discloses the third roller pair 44 is provided at a substantially center portion of the second carrying path 40 (Figure 1); the second carrying path 40 connects the downstream side and upstream side in the object carrying direction of the first carrying path 26, and forms a loop in incorporating with the first carrying path 26 (Figure 1); a sheet feed device 24 for feeding the object (paper) to the first carrying path 26, the sheet feed device 24 being provided outside the loop formed of the first and second carrying paths 26 and 40 (Figure 1); the second carrying path 40 has a corner part and a substantially straight part, and the third roller pair 44 is provided in the

substantially straight part (Figure 1); and the second carrying path 40 has three roller pairs 42, 44, and 48 along the object carrying direction (Figure 1).

Saito et al. differs from the instant claimed invention in not disclosing a resist roller provided on the first carrying path, being located in an upstream side of the transfer device; and the object is guided in an inverted state to an upstream side of the resist roller.

Yanagi discloses an image forming apparatus comprising: a process unit 24; a transfer roller 13; a resist roller 31 provided on a first carrying path 25, being located in an upstream side of the transfer roller 13; a discharge section 10; a carrying device 16; and a second carrying path 27 on which the object (paper) 23 carried in the direction C away from the discharge section 10 by the carrying device 16 is guided from a downstream side of the transfer roller 13 of the first carrying path 25 and is guided in an inverted state to an upstream side of the resist roller 31 (Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the resist roller as taught by Yanagi to the first carrying path of Saito et al. to ensure the paper conveyed at exact timing with the rotation of the image carrier (Yanagi, column 4, lines 7-9).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. in view of Yanagi.

Saito et al. discloses an image forming apparatus comprising: a sheet feed roller 24 for feeding an object (paper) onto which an image is to be transferred (column 3, lines 21-24); a first carrying path 26 on which the object (paper) fed by the sheet feeding

roller 24 is carried (Figure 1); an image carrier 16; a transfer section 28 for transferring the image onto the object (paper) (column 3, lines 21-25); a fixing section 32; a discharge roller pair 36 for discharging the object (paper) on which the image is fixed (column 3, lines 25-33); a receiving section 38 provided in the vicinity of the discharge roller pair 36, for receiving the object (paper) discharged from the discharge roller pair 36 (Figure 1); a second carrying path 40 which merges with the first carrying path 26 at a position upstream in the object carrying direction with respect to the image carrier 16 and downstream in the object carrying direction with respect to the sheet feed roller 24 and at a position downstream in the object carrying direction with respect to the fixing section 32 (Figure 1), and wherein the discharge roller pair 36 is rotatable in normal and reverse directions, and after it sends an object, on one surface of which an image is fixed, toward the receiving section 38 by a predetermined distance, it sends the object in the direction away from the receiving section 38 to guide the object to the second carrying path 40 from the position downstream with respect to the fixing section 32 (Figure 1), and wherein the second carrying path 40 guides the object sent by the discharge roller pair 36 to the first carrying path 26 at the position upstream in the object carrying direction with respect to the image carrier 16 and upstream in the object carrying direction with respect to the transfer section 28 in a state where the object is inverted, and has a first roller pair 42 upstream in the object carrying direction, a second roller pair 48 downstream in the object carrying direction, and a third roller pair 44 between the first and second roller pairs 42 and 48 (Figure 1).

Saito et al. differs from the instant claimed invention in not disclosing a resist roller which aligns the object carried by the first carrying path, and the object is guided in an inverted state to an upstream side of the resist roller.

Yanagi discloses an image forming apparatus comprising: a process unit 24; a transfer roller 13; a resist roller 31 provided on a first carrying path 25, being located in an upstream side of the transfer roller 13; a discharge section 10; a carrying device 16; and a second carrying path 27 on which the object (paper) 23 carried in the direction C away from the discharge section 10 by the carrying device 16 is guided from a downstream side of the transfer roller 13 of the first carrying path 25 and is guided in an inverted state to an upstream side of the resist roller 31 (Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the resist roller as taught by Yanagi to the first carrying path of Saito et al. to ensure the paper conveyed at exact timing with the rotation of the image carrier (Yanagi, column 4, lines 7-9).

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. in view of Yanagi.

Saito et al. discloses an image forming method comprising: carrying an object (paper) onto which an image is to be transferred through a first carrying path 26 to a portion between an image carrier 16 for carrying an image and a transfer device 28 which is provided opposite to the image carrier 16 with the first carrying path 26 interposing therebetween; (column 3, lines 21-25); transferring an image onto one surface of the object by the transfer device 28 (column 3, lines 21-25); carrying the

object onto one surface of which the image has been transferred toward a discharge section 38 provided on a discharge port 36 of the first carrying path 26 by a predetermined distance, and then carrying in a direction away from the discharge section 38 (Figure 1); guiding the object to a second carrying path 40 from a downstream side of the transfer device 28 (column 3, lines 34-43 and Figure 1); carrying the object in an inverted state, to an upstream side of the transfer device 28, through a first roller pair 42 provided upstream in the object carrying direction of the second carrying path 40, a second roller pair 48 provided downstream in the object carrying direction of the second carrying path 40 and a third roller pair 44 provided between the first and second roller pairs 42 and 48 (Figure 1); and discharging the object which has been carried upstream of the first carrying path 26 in an inverted state, to the transfer device 28 on the first carrying path 26, transferring an image onto the other surface of the object, and discharging the object to the discharge section 38 (column 3, lines 44-54 and Figure 1).

Saito et al. differs from the instant claimed invention in not disclosing the step of carrying the object to a transfer device after the object is aligned by a resist roller, and the step of carrying the object in an inverted state, to an upstream side of the resist roller.

Yanagi discloses an image forming apparatus comprising: a process unit 24; a transfer roller 13; a resist roller 31 provided on a first carrying path 25, being located in an upstream side of the transfer roller 13; a discharge section 10; a carrying device 16; and a second carrying path 27 on which the object (paper) 23 carried in the direction C



away from the discharge section 10 by the carrying device 16 is guided from a downstream side of the transfer roller 13 of the first carrying path 25 and is guided in an inverted state to an upstream side of the resist roller 31 (Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the resist roller as taught by Yanagi to the first carrying path of Saito et al. to ensure the paper conveyed at exact timing with the rotation of the image carrier (Yanagi, column 4, lines 7-9).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. in view of Yanagi as applied to claim 13 above, and further in view of Tsuchitoui (US Pat. No. 5,872,900, cited in Form PTO-1449).

Saito et al. in view of Yanagi, as discussed above, further discloses a detection sensor 90 (in Saito) for detecting the object.

Saito et al. in view of Yanagi differs from the instant claimed invention in not disclosing the detection sensor being provided in the vicinity of each of the first and second roller pairs.

Tsuchitoui discloses an image forming apparatus comprising a first carrying path (from reference numeral 211 to reference numeral 216; Figure 2); a second carrying path (from reference numeral 231 to reference numeral 236; Figure 2); the second carrying path includes a first roller pair 231, a second roller pair 234, and a third roller pair 233 between the first and second roller pairs 231 and 234; and first and second sensors 232 and 235 being provided in the vicinity of each of the first and second roller pairs 231 and 234 (Figure 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the multiple sensors and their positions as taught by Tsuchitoui to the second carrying path of Saito et al. in view of Yanagi to timely control the paper (Tsuchitoui, column 6, lines 26-33).

8. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. in view of Yanagi as applied to claim 13 above, and further in view of Tsuchitoui (US Pat. No. 5,872,900, cited in Form PTO-1449).

Saito et al. in view of Yanagi, as discussed above, further discloses a detection sensor 90 (in Saito) for detecting the object.

Saito et al. in view of Yanagi differs from the instant claimed invention in not disclosing the detection sensor being provided in the vicinity of each of the first and second roller pairs.

Tsuchitoui discloses an image forming apparatus comprising a first carrying path (from reference numeral 211 to reference numeral 216; Figure 2); a second carrying path (from reference numeral 231 to reference numeral 236; Figure 2); the second carrying path includes a first roller pair 231, a second roller pair 234, and a third roller pair 233 between the first and second roller pairs 231 and 234; first and second sensors 232 and 235 being provided in the vicinity of each of the first and second roller pairs 231 and 234 (Figure 2); the first sensor 232 being provided in the vicinity of a beginning portion of the second carrying path (Figure 2); and the second sensor 235 being provided in the vicinity of an end portion of the second carrying path (Figure 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the multiple sensors and their positions as taught by Tsuchitoi to the second carrying path of Saito et al. in view of Yanagi to timely control the paper, with the image on one side of the paper, back to the first carrying path for transferring image on the opposite side of the paper (Tsuchitoi, column 6, lines 26-67).

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Response to Arguments***

10. Applicant's arguments filed 10/18/04 have been fully considered but they are not persuasive.


Applicant argues that claims 13 and 14 are allowable because Saito et al. fails to disclose a resist roller on a first carrying path that aligns objects carried on the first carrying path. Applicant also argues that claim 15 is allowable because Saito et al. fails to disclose a step in which an object is carried through a first carrying path to a portion between an image carrier and a transfer device, after the object is aligned by a resist roller. It is true that Saito et al. does not disclose or teach a resist roller on a first carrying path; however, this feature is disclosed in Yanagi. See above rejections. Also, see above rejections for the reasons why claims 3-8, 10, and 11 are not allowable.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (703) 308-7617. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Ssc  
November 1, 2004